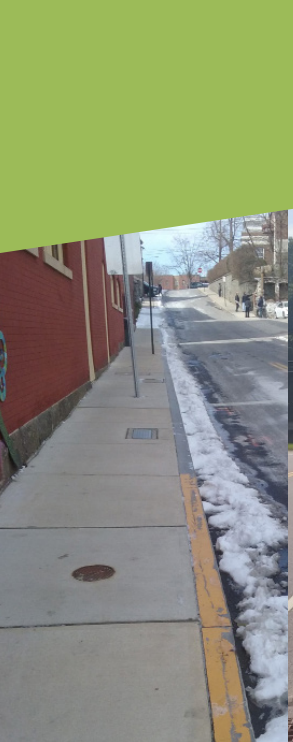
Community Connectivity Program: Road Safety Audit Participant Report

Summary of Findings

July 2019



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1. Introduction

1.1 Overview

The Community Connectivity Program began as an initiative established by Governor Dannel P. Malloy in February 2015 as part of a strategic 30-year transportation plan *Let'sGoCT! – Connecticut's Bold Vision for a Transportation Future* (Figure 1)[1]. The plan articulated four major goals for the future of Connecticut's bike and pedestrian network system that aimed to:

- **promote livable and walkable communities by promoting context-sensitive designs that respect community values**
- **establish or reestablish transit-oriented development (TOD) in urban centers**
- **complete the gaps in the regional trail network**
- **establish a program to support walkability and pedestrian urban centers**

Administered through the Connecticut Department of Transportation (CTDOT), the Community Connectivity Program sought to examine safety issues and improve accommodations for bicyclists and pedestrians in urban, suburban and rural community centers.

Figure 1 The Community Connectivity program grew out of *Let'sGoCT*

[1] Connecticut General Assembly, June 2015 Special Session, Public Act number 15-1.

The first phase of the Community Connectivity Program was awarded $3.2 million in 2016. Road Safety Audits (RSA's) were conducted by the CTDOT with assistance from their consultant AECOM. An RSA is a formal safety assessment of the existing conditions of walking and biking routes and is intended to identify issues that may discourage or prevent walking and bicycling activities. It is a qualitative review by an independent team experienced in traffic, pedestrian, and bicycle operations and design. This review considers the safety of all road users and proactively assesses mitigation measures to improve the safe operation of the facility by reducing the potential crash risk. One hundred twenty-seven (127) applications were received through this program from eighty (80) communities across the state (Figure 2). Municipalities that submitted more than one application were asked to select a priority application. Over the course of the first 18-months of the program eighty (80) municipalities elected to participate and these RSAs were completed in June of 2017. Immediately following completion of this first round of RSAs, additional communities were selected when the state legislature requested that a detailed RSA be performed along a 23-mile segment of US Route 1. This included the municipalities of Greenwich, Stamford, Darien, Norwalk and Westport in southwestern Connecticut. Results of the second phase of RSAs focused on Route 1 are presented in Section 4 of this report.

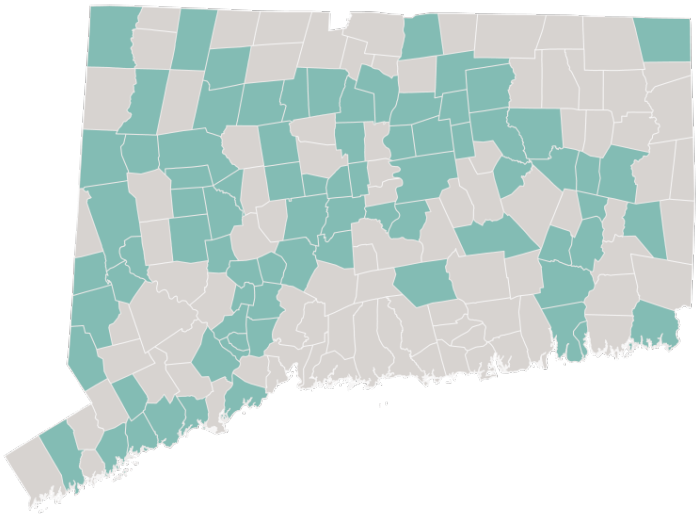


Figure 2 Community Connectivity Program Participants

As part of the *Let'sGoCT!* five-year ramp up plan, the Community Connectivity Program was budgeted to receive an additional $10-million each year over four years[2]. During the second phase of the program Connecticut communities, including those who have participated in the initial RSA's, can pursue additional funding for smaller scale capital infrastructure improvements through the Community Connectivity Grant Program (CCGP). Grants will be awarded on a competitive basis and will range between $75,000 and $400,000.

1.2 Purpose and Need

Serving as both the gateway to New England and the midpoint between New York City and Boston, Connecticut's location means that the state's transportation infrastructure impacts many and has great potential to attract investment. There is high demand to better connect communities throughout the state by improving safety for bicyclists and pedestrians in travel corridors, municipal roadways and intersections across the state. These spaces not only serve as places where people can meet for social, educational, and recreational activities, but also as places of employment, transit hubs, and business districts.

[2] Program was funded through 2019. Future funding is contingent on annual budget allocations by the Connecticut State Bond Commission

The transportation investments recommended under *Let'sGoCT*! outline a future for Connecticut's modal systems that will be safer, reliable, and best-in-class. As part of this vision, the Community Connectivity program seeks to establish a transportation infrastructure that is efficient, multi-modal, resilient, and more responsive to 21st century lifestyles. The recommendations laid out in the RSA's will make the state safer and more accommodating for pedestrians and bicyclists, thereby encouraging more people to use these healthy and environmentally sustainable modes of travel. These improvements will help make Connecticut's community centers more attractive, safer places to live and work.

2. Community Connectivity Program: Road Safety Audit

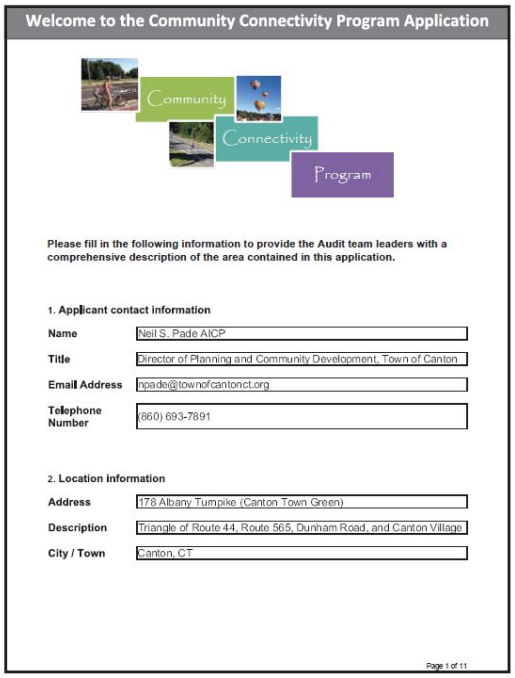
The initial step of the Community Connectivity Program was to conduct RSA's in municipalities across the state. The audits focused on identifying bike and pedestrian safety concerns within a designated corridor or intersection.

An RSA is a formal safety performance examination of an existing road or intersection by an independent multidisciplinary team. Each completed RSA documents individualized short-term, mid-term and long-term recommendations.

RSA's are intended to be used as a planning tool to understand the community's needs and to guide the municipality in selecting, ranking and prioritizing projects for future funding.

Figure 3 Field Audit in Bristol with the RSA team

The RSA team was comprised of representatives from the CTDOT and their engineering sub-consultant, AECOM, as well as a multi-disciplinary team identified by each participating municipality (Figure 3). Each municipality was encouraged to reach out to the key decision makers and champions in their community to participate in the RSA. Emphasis was placed on identifying participants knowledgeable about the concerns of bicyclists and pedestrians in the identified locations, including representatives of police, fire, postal service, community groups (neighborhood organizations, etc.), as well as Department of Public Works (DPW), economic development and planning officials. This cross section of participants was an important component of the program's success in providing well-rounded informed input on safety concerns in a fully representative perspective.


Welcome to the Community Connectivity Program Application

Community Connectivity Program

Please fill in the following information to provide the Audit team leaders with a comprehensive description of the area contained in this application.

1. Applicant contact information

Name	Neil S. Pade AICP
Title	Director of Planning and Community Development, Town of Canton
Email Address	npade@townofcantonct.org
Telephone Number	(860) 693-7891

2. Location Information

Address	178 Albany Turnpike (Canton Town Green)
Description	Triangle of Route 44, Route 565, Dunham Road, and Canton Village
City / Town	Canton, CT

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Figure 4 An application for the Community Connectivity Program

2.1 The Application Process

Municipalities from across the state were invited by the CTDOT to apply and participate in the Community Connectivity Program. Both local and state roads were eligible for the program. Municipalities were allowed to submit more than one application but were requested to identify which application would be their priority focus.

Applicants were asked to provide the following preliminary information regarding the identified road corridor or intersection:

- RSA Application (Figure 4)
- Location map (Required)
- Collision data (If available)
- Traffic data (Average Daily Traffic (ADT) or Vehicle Miles Traveled (VMT) if available)
- Pedestrian/bicycle data (If available)

2.2 Application Prioritization

All applications submitted were assessed for their complexity by looking at the areas of concern, length, submitted data, and overall application completeness. Audits were scheduled to distribute the complex RSAs in such a manner to allow for adequate post-processing time.

2.3 Conducting the Road Safety Audit

Each RSA consisted of three parts, all of which occurred during one business day:

1. **Pre-Audit Meeting**: In the morning, the RSA team met to go over the objectives of the audit and review information relevant to the RSA location.
2. **Field Audit**: The field audit involved the physical inspection of the RSA location. During this period, the RSA team walked the area and conducted a safety performance review to evaluate the identified safety concerns.
3. **Post-Audit Meeting**: The last stage of the RSA involved a wrap-up meeting with the RSA team to discuss the field audit, identify safety concerns and develop short, mid, and long-term recommendations for improvement.

Figure 5 Pre-Audit meeting in East Hartford

2.4 The Road Safety Audit Report

Upon completion of the RSA each participating community was provided with a report (Figure 6) detailing the documented safety concerns, as well as potential recommendations divided into short-term, mid-term and long-term categories.

Short-term recommendations refer to modifications that can be expected to be completed quickly, perhaps within ***6 months*** and certainly, if funding is available, in ***less than a year.***

Typical examples of short-term recommendations include relatively low-cost alternatives, such as striping and signing, and items that do not require additional study, design, or investigation (such as right-of-way acquisition).

Mid-term recommendations may be more costly and require establishment of a funding source, or they may need some additional study or design in order to be accomplished. Generally, they should be completed within a window of time of ***18 months to 2 years*** if funding is available.

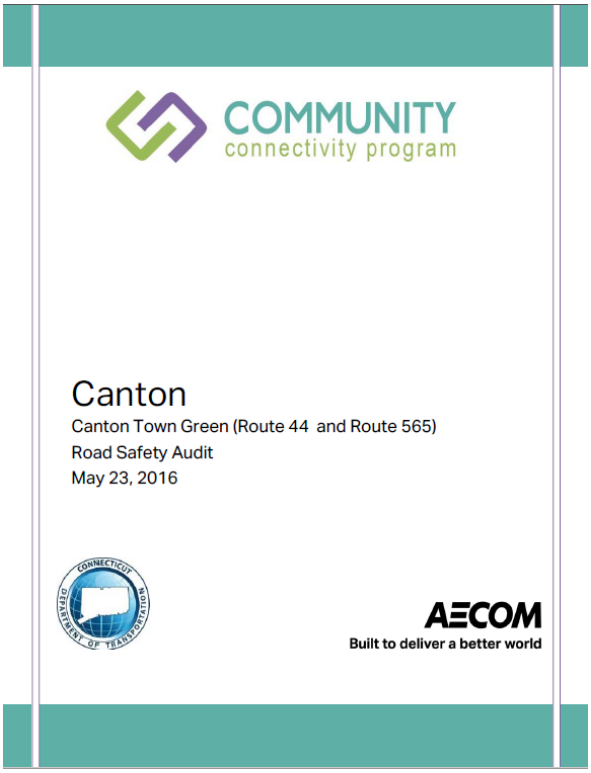


Figure 6 Standard Road Safety Audit Report

Typically, mid-term recommendations include relatively quick turn-around items, and do not require significant lengths of time before they can be implemented. Examples can include

signal/sign improvements, curb ramp upgrades at pedestrian crossings to compliance standards of the American with Disabilities Act.

Long-term recommendations include those that require substantial additional study and engineering and may require significant funding mechanisms and/or right-of-way acquisition. These projects generally fall into a horizon of ***2 years or more*** when funding would be likely to be available.

Typical examples of long-term recommendations include sidewalk repair or network extension, planning studies or master plans, and intersection/roadway redesigns.

2.5 Program Transparency

The Community Connectivity Program website (Figure 7), www.ctconnectivity.com, offered an interactive map that tracked the pending status of each program phase for a participating municipality. When completed, each RSA Report was posted to the website. Press releases and announcements were also posted to keep participants and the public aware of ongoing program efforts.

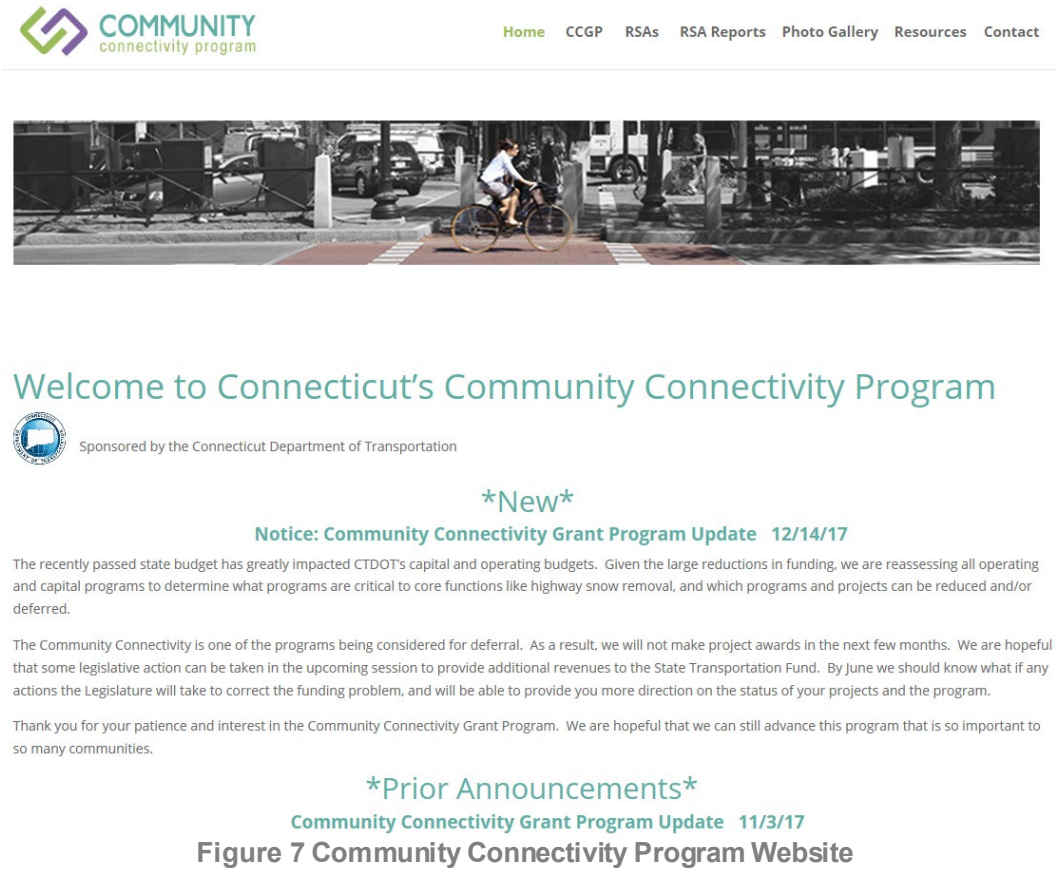


Figure 7 Community Connectivity Program Website

3. RSA Recommendations

3.1 Introduction

Of the 80 communities where audits were performed, 13 are classified as rural communities (encompasses all population, housing, and territory not included within an urban/suburban area (US Census)), 8 are classified as suburban (Urban Clusters (UCs) suburban areas are at least 2,500 and less than 50,000 people. (US Census)), and 59 are classified as urban (Urbanized Areas (UAs) of 50,000 or more people (US Census). Figure 8 illustrates these typical RSA classifications seen across the state. Although common elements exist in various municipalities, each RSA defined its own context sensitive recommendations. Figure 9 and Table 1 show the geographic location, profile context, and roadway ownership for each RSA conducted.

83%

Of all RSA's conducted were on **state roads.**

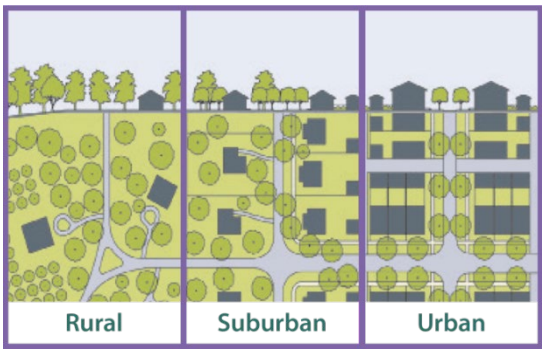


Figure 8 Common RSA Profiles

As stated previously, recommendations were categorized based on perceived implementation time and monetary obligation necessary to complete the recommendation. Many community profiles recommended improvements in the following areas: pavement markings, Americans with Disabilities Act (ADA) compliance, sign/signal improvements, and general infrastructure maintenance. Because of the diverse nature of RSA profiles and roadway ownership, an overarching need for communication and collaboration was identified. As recommendations were openly discussed in the post-audit meeting with the RSA team, a clear strategy for achieving all short, mid, and long-term recommendations was established for all participants.

When discussing possible recommendations, the prevalence of crashes serves as a measurable indicator of the relative safety of a roadway and was used to gauge areas of concerns prior to and during the audits. Additionally, crash

Participants by Community Profile RSA Road Type & Total Audited Miles			
Urban Communities		No. of Roads	Total Miles
	Local Road	11	9.68
	State Road	48	39.3
Suburban Communities		No. of Roads	Total Miles
	Local Road	1	1.4
	State Road	7	13.5
Rural Communities		No. of Roads	Total Miles
	Local Road	2	1.9
	State Road	11	18
TOTAL # OF RSA's PERFORMED ON LOCAL ROADS		14	12.98 mi.
TOTAL # OF RSA's PERFORMED ON STATE ROADS		66	70.8 mi.
# OF TOTAL RSA's PERFORMED & MILES		**80**	**83.78 mi.**

Table 1 RSA's by Profile and Ownership

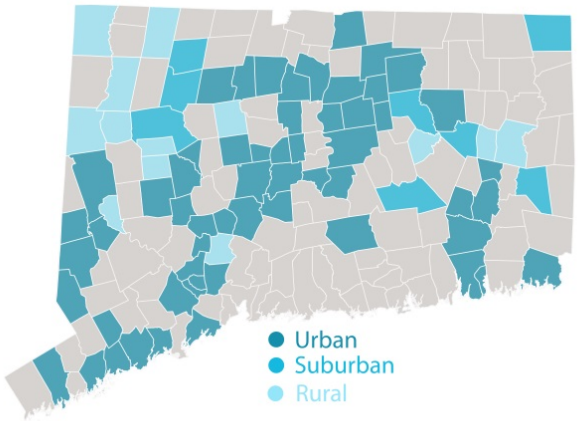


Figure 9 Classification Map

data can be used in the future to identify the prospective benefits of addressing concerns listed within each community's RSA.

The crash data gathered for the Community Connectivity Program was derived from the UCONN Connecticut Crash Data Repository and contains three years of data for the period of 2012 to 2014, in addition to geo-located data from 2015 (Figure 10). In general, there was a very low rate of fatal crashes on any of the roads under audit. In most cases the crash severity extended to property damage only, with non-fatal injuries occurring between 12% and 25% of the time. Overall, this would suggest that crashes within the RSA boundaries are occurring at lower speeds, near or around intersections and in generally more built-up areas where traffic tends to move slower.

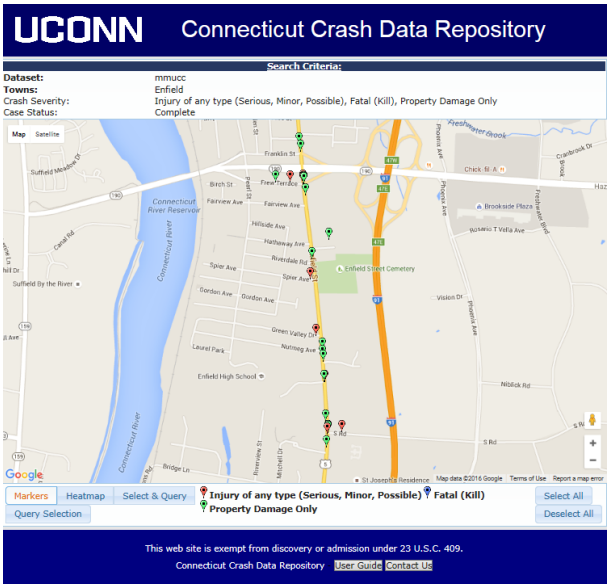


Figure 10 Example of 2015 Crash Data

However, there were instances of communities having more non-fatal injury crashes than a surrounding area with a similar built environment. This is likely due to specific geometric or traffic control issues at that particular location. It is important to note that crash data does not include instances of near misses or close calls.

70%

Of all recommendations involve **improvements at intersections**

70% of all crash data collected involved accidents at intersections, a rate almost identical to that of intersection improvement recommendations. This correlation is a good indication that all participating municipalities consider intersections as a focal point when proceeding with planning and construction efforts. Figure 11 depicts crash types assessed across the rural, urban, and suburban community types using three years of crash data for each RSA.

While the rate of occurrence for many of the crash types is relatively consistent across the three community types, rear-end and fixed object (tree's, utility poles, rocks, signs etc.) crashes are notable exceptions. The rate of rear-end crashes is far greater in urban communities than either the rural or suburban communities. This is likely related to the density of traffic seen at these RSA locations and the higher frequency of intersections. Conversely, there is a far greater rate of fixed object crashes along rural and suburban corridors than urban corridors. This is likely related to a low traffic density and roadways with less development and fewer intersections. Sections 4.2, 4.3, and 4.4 describe key contributing factors and common recommendations discussed at the RSAs' field audits.

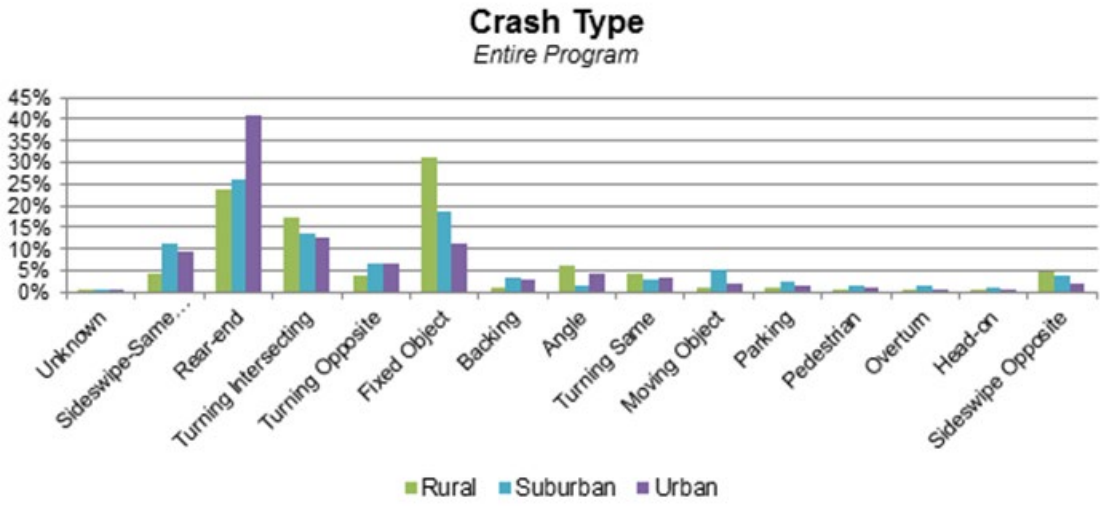


Figure 11 Crash Data

3.2 Short-Term Recommendations: 6-12 months

Short-term recommendations address immediate needs and deficiencies at areas of concern that were identified during the RSA's. It is anticipated that these efforts can generally be completed within a 6 to 12-month timeframe. The recommendations generally include activities that are affordable and do not require large-scale planning or construction efforts. Signing, minor signal improvements, modification of pavement markings, crosswalk improvements, and general maintenance are all frequently-recommended short-term improvements. These are activities that have a large impact without the need for substantial investment in new infrastructure or time. One example of a short-term improvement project is repainting a faded crosswalk to increase visibility of pedestrian facilities for clarity and right of way purposes.

19 SHORT TERM RECOMMENDATION	
Sign an or Signal Improvements	88%
Modify Pavement Markings	73%
Small Scale Planning Activity	60%
Crosswalk Improvement, Expansion or Modification	59%
Mowing, Trimming and General Maintenance	58%
DOT/ State/ COG Request or Coordination	51%
Safety Improvements	33%
Sidewalk Improvement, Expansion or Modification	24%
Bike/ped Specific Infrastructure	24%
ADA Complience	23%
Outreach/ Funding	18%
Speed Limit Change/ Enforcement	16%
Modify Road Design or Intersection	15%
Add or Reduce Parking	13%
Ped/ Bike/ Complete Street Policy	13%
Transit Improvements	8%
Aesthetic/ Landscaping	6%
Enforce or Create Ordinance	4%
Environmental Improvements	1%

Table 2 Summary of All Short-Term Recommendations

Approximately 83% of all RSA's conducted consisted of state roadway facilities. Given the various maintenance agreements in place with municipalities and property owners, the need for collaboration is paramount for the successful implementation of recommendations. Through the RSA process transparent lines of communication were formed between the RSA participants which enabled a substantial number of recommendations to be completed in the 6-12 month timeframe.

When assessing the distribution of short-term recommendations by project type between state and local roads (Figure 12), most are well-balanced between road type. However, three recommendations are more common for local roads: Sign and Signal Improvements, Bike/Ped Infrastructure, and Speed Limit Change/Enforcement. These three recommendations offer low-cost solutions to increase safety by providing access to non-motorized users in lower vehicle-traveled areas and provide clarity for all users to navigate to destinations.

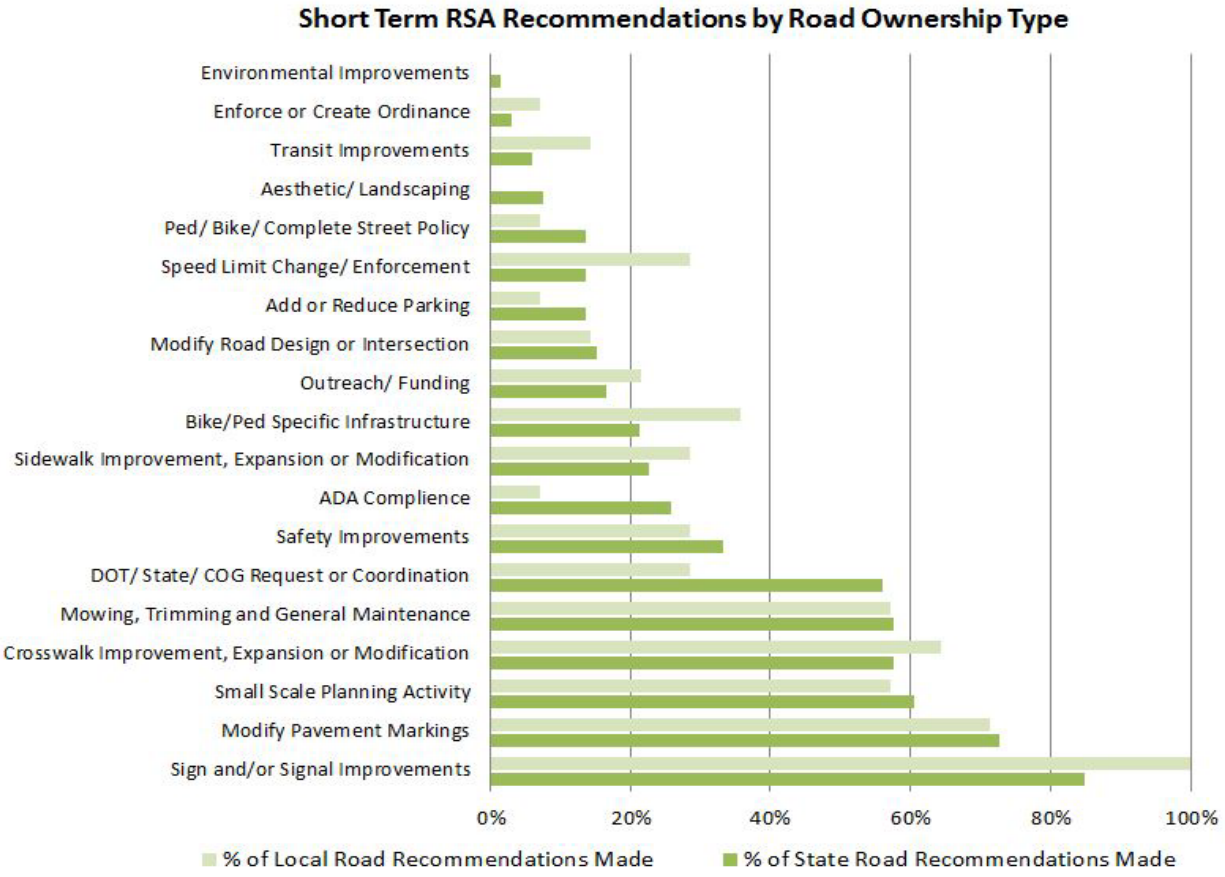


Figure 12 Short-Term Recommendations - State vs. Local Roads

CTDOT VIP Program Improved 154.5 Miles of State roadway from 2009-2016

CTDOT maintenance districts play a substantial role in assisting towns in completing these short-term recommendations when involving State roadways. Figure 14, below, is an example of a location where there are no crosswalks to indicate pedestrian movements to motorists. Although this corner, located at West Main Street in Avon, has an ADA compliant ramp, there are no receiving ramps on any of the 3 other corners.

In the case of Ansonia (Figure 13), a recent pavement preservation project was completed through the Vendor in Place (VIP) program. The project did not include the coordination between the municipality and the CTDOT necessary for installing proper ADA accommodation. The photo shows new crosswalks being installed but the ramps themselves are not ADA compliant. This curb ramp is missing detectable warning strips and the large crack makes this ramp a safety concern for all pedestrian users. Coordination with municipalities is needed to design more

complete facilities and to address safety concerns in a holistic manner as regularly scheduled maintenance projects are performed.

The key takeaway from all short-term recommendations is the importance of coordination between Municipalities and State entities when conducting routine maintenance efforts. Better coordination efforts would help eliminate most simple safety issues with the State's current infrastructure and improve existing connections between communities.

Figure 13 Ansonia RSA - Curb Ramp not ADA Compliant

Figure 14 Avon RSA - Missing Crosswalk

3.3 Mid-term Recommendations: 18 months – 2 years

Mid-term recommendations generally involve more intensive modifications or require a broader planning, engineering or outreach process, and require funds that may not immediately be available. These projects typically have an estimated 18 month to 2-year timeframe. The most recommended categories were signal and sign improvements, sidewalk (expansion or improvement), crosswalk realignment, expansion or removal; minor alteration, expansion or improvement to roadways or intersections; and Americans with Disabilities Act (ADA) compliance efforts. Table 3 shows all recommendations made for midterm solutions and Figure 15 shows these recommendations broken out into rural, suburban, and urban areas. It is

16 MID TERM RECOMMENDATIONS	
Alter/ Expand/ Improve Intersection or Road	73%
Signal/ Sign Improvements	69%
ADA Compliance	64%
Sidewalk Repair/ Expansion/ Improvement	63%
Crosswalk Realingnment/ Expansion/ Removal	62%
Aesthetic/ Safety/ Community Improvement	36%
Initiate Planning/ Management Study	36%
DOT/ Transit Requests or Coordination	35%
Develop Bike/Ped Plan & CSP	20%
Lighting	19%
Expansion or Removal of Parking	15%
Curb Radius Reduction	14%
Create or Expand Multi-Use Pathway	14%
Public Outreach or Zoning/ Town Code Changes	10%
Bike Lanes	9%
Create Master Plan	5%

Table 3 Summary of All Mid-term Recommendations

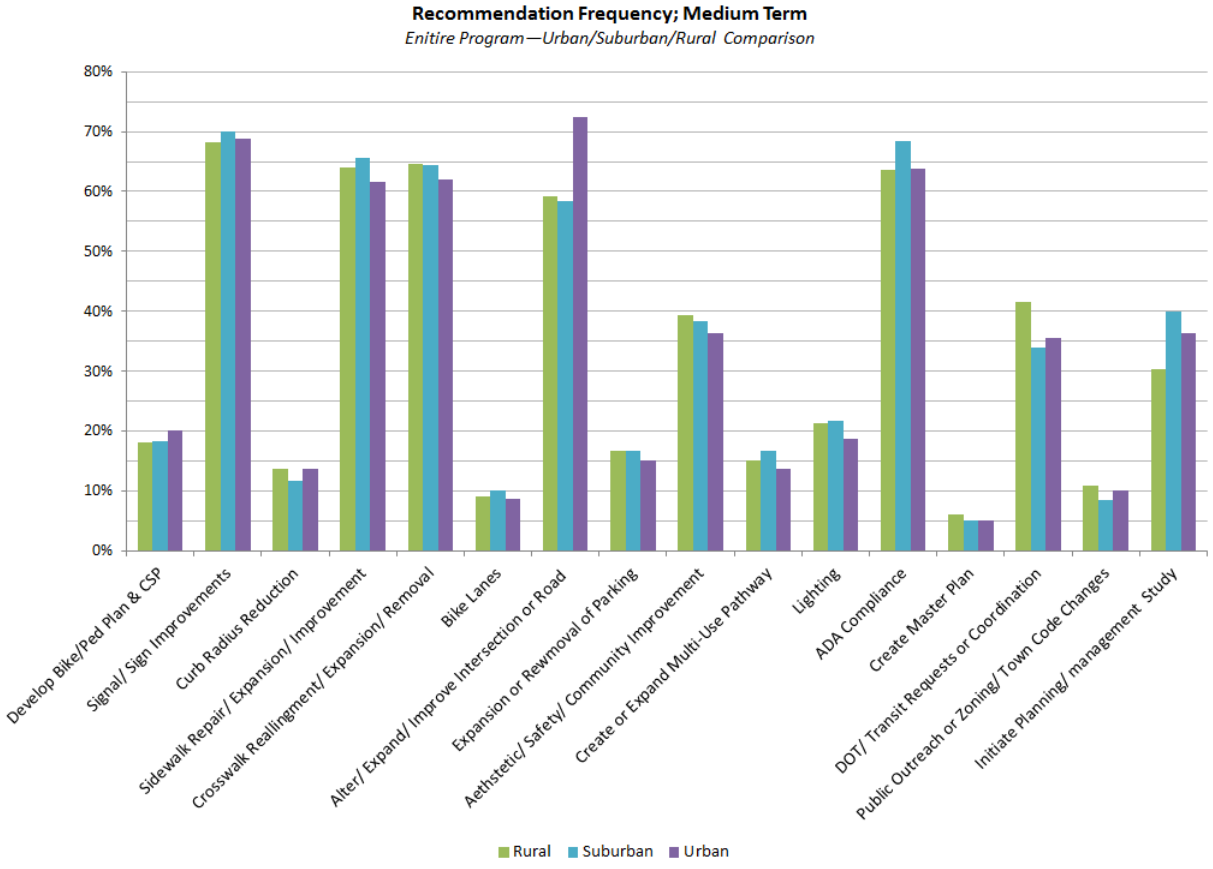
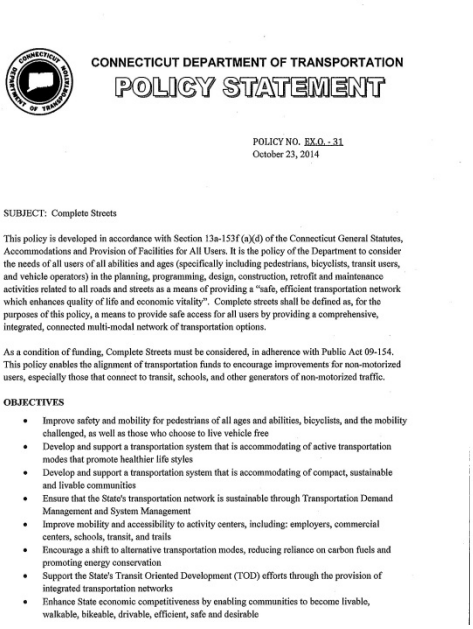


Figure 15 Mid-term Recommendations Program Wide

important to note that there is need for these more intensive mid-term projects across all types of built environments in the state. Safety is a concern in all community profiles, which is why the CTDOT has enacted a complete streets policy (Figure 16) that is focused on safety for all users.

The distribution of mid-term recommendations by project type is generally well-balanced between state and local roads (Figure 17). The recommendations that stand out for state roads are the requests for coordination with the CTDOT relating mostly to intersection, signal, and ADA alterations.



CONNECTICUT DEPARTMENT OF TRANSPORTATION

POLICY STATEMENT

POLICY NO. EX.O. - 31
October 23, 2014

SUBJECT: Complete Streets

This policy is developed in accordance with Section 13a-153f (a)(d) of the Connecticut General Statutes, Accommodations and Provision of Facilities for All Users. It is the policy of the Department to consider the needs of all users of all abilities and ages (specifically including pedestrians, bicyclists, transit users, and vehicle operators) in the planning, programming, design, construction, retrofit and maintenance activities related to all roads and streets as a means of providing a "safe, efficient transportation network which enhances quality of life and economic vitality". Complete streets shall be defined as, for the purposes of this policy, a means to provide safe access for all users by providing a comprehensive, integrated, connected multi-modal network of transportation options.

As a condition of funding, Complete Streets must be considered, in adherence with Public Act 09-154. This policy enables the alignment of transportation funds to encourage improvements for non-motorized users, especially those that connect to transit, schools, and other generators of non-motorized traffic.

OBJECTIVES

- Improve safety and mobility for pedestrians of all ages and abilities, bicyclists, and the mobility challenged, as well as those who choose to live vehicle free
- Develop and support a transportation system that is accommodating of active transportation modes that promote healthier life styles
- Develop and support a transportation system that is accommodating of compact, sustainable and livable communities
- Ensure that the State's transportation network is sustainable through Transportation Demand Management and System Management
- Improve mobility and accessibility to activity centers, including: employers, commercial centers, schools, transit, and trails
- Encourage a shift to alternative transportation modes, reducing reliance on carbon fuels and promoting energy conservation
- Support the State's Transit Oriented Development (TOD) efforts through the provision of integrated transportation networks
- Enhance State economic competitiveness by enabling communities to become livable, walkable, bikeable, drivable, efficient, safe and desirable

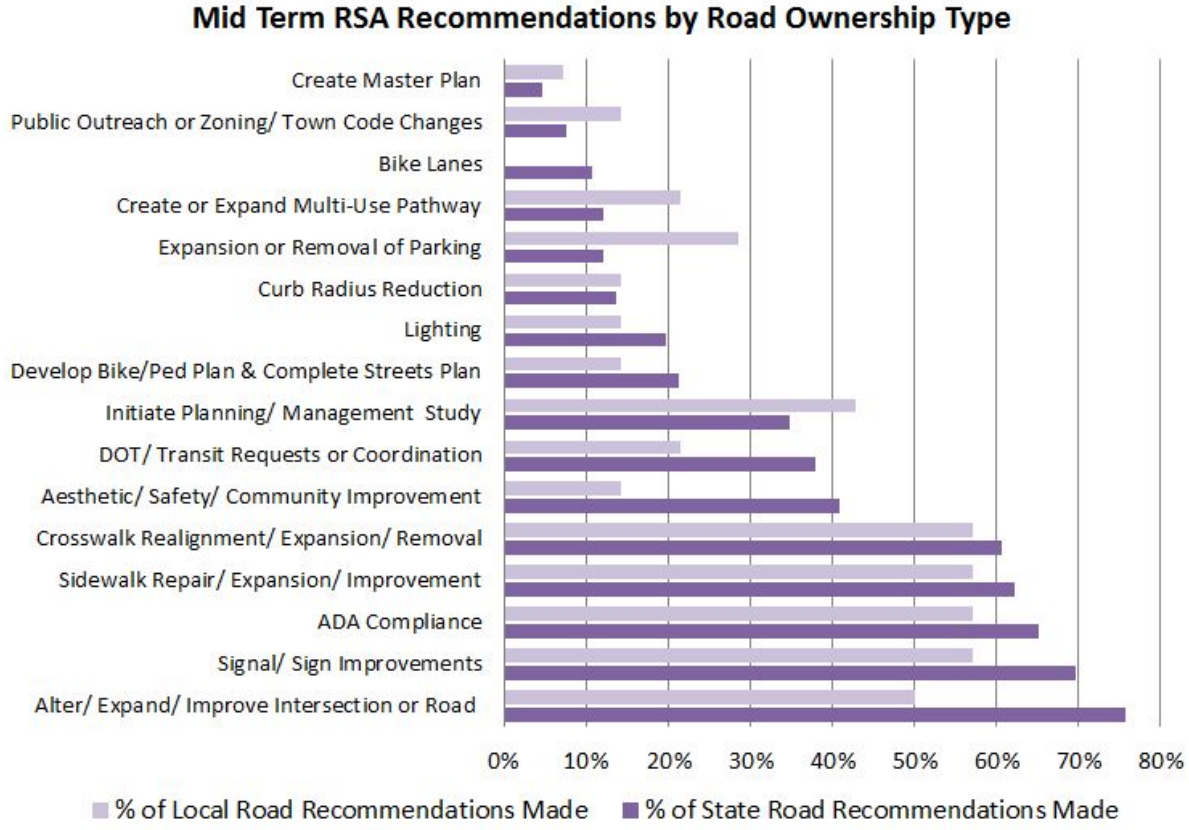


Figure 17 Mid-term Recommendations - State vs. Local Roads

30%

of the municipalities studied had midterm recommendations for zoning revisions

A common topic discussed during RSA's was how development is controlled and administered. As communities continue to expand and grow their economic base, the connection between development and non-motorized infrastructure is important for safe and successful economic development. Figure 19 and Figure 18 are common mid-term examples seen in many RSA's of the failure to include multimodal connectivity as land is developed around the state. Figure 19 shows a gap in the pedestrian network caused by various developments staggered over time that likely had varying site requirements. Network gaps such as these exist in all community profiles to varying degrees and cause pedestrians to either traverse safety challenged areas or chose a motorized mode of travel.

Common developments seen on RSA's are retail or residential complexes or a combination of both. Figure 18 is an example of development being constructed where non-motorized connections have been overlooked. A residential condominium complex with approximately 100 units is directly adjacent to a diner and convenience store. Connections to amenities directly across the street are not safely accessible to all users, and this causes unsafe pedestrian behavior. As seen in Figure 18, a pedestrian is forced to traverse a 4-lane roadway that carries as much as 37,900 vehicles per day. A main recommendation for this specific situation was to investigate the possibility of constructing a signalized intersection, which creates an environment that is safe and accommodating for all users.

Figure 19 Southington RSA - Incomplete Sidewalk Network

Figure 18 New Milford RSA - Pedestrian Crossing Mid-block

3.4 Long-term Recommendations: 2+ years

Long-term recommendations are intended to highlight improvements that generally require a more prolonged planning effort, substantial investment, and a timeframe of more than two years to undertake. The most prominent recommendations within this timeframe are sidewalk repair, expansion or improvement and significant alterations to intersections or roads. Many of the identified projects also involve acquisition of right of way. These recommendations require robust planning and engineering in order to be implemented and have a high anticipated monetary cost. Table 4 shows all long-term recommendations and

12 LONG TERM RECOMMENDATIONS	
Alter Intersection or Road Design	74%
Initiate Planning Study or Management Plan	48%
Create or Expand Trail or Multi-Use Pathway	29%
Signal/ Sign Improvements	26%
DOT Requests or Coordination	26%
ADA Compliance	20%
Aesthestic/ Safety Improvements	18%
Expansion or Removal Parking	14%
Infrustructure Modification	9%
Public Outreach or Zoning/ Town Code Changes	9%
Lighting	6%
Create Transit Oriented Development Plan	3%

Table 4 Summary of All Long-Term Recommendations

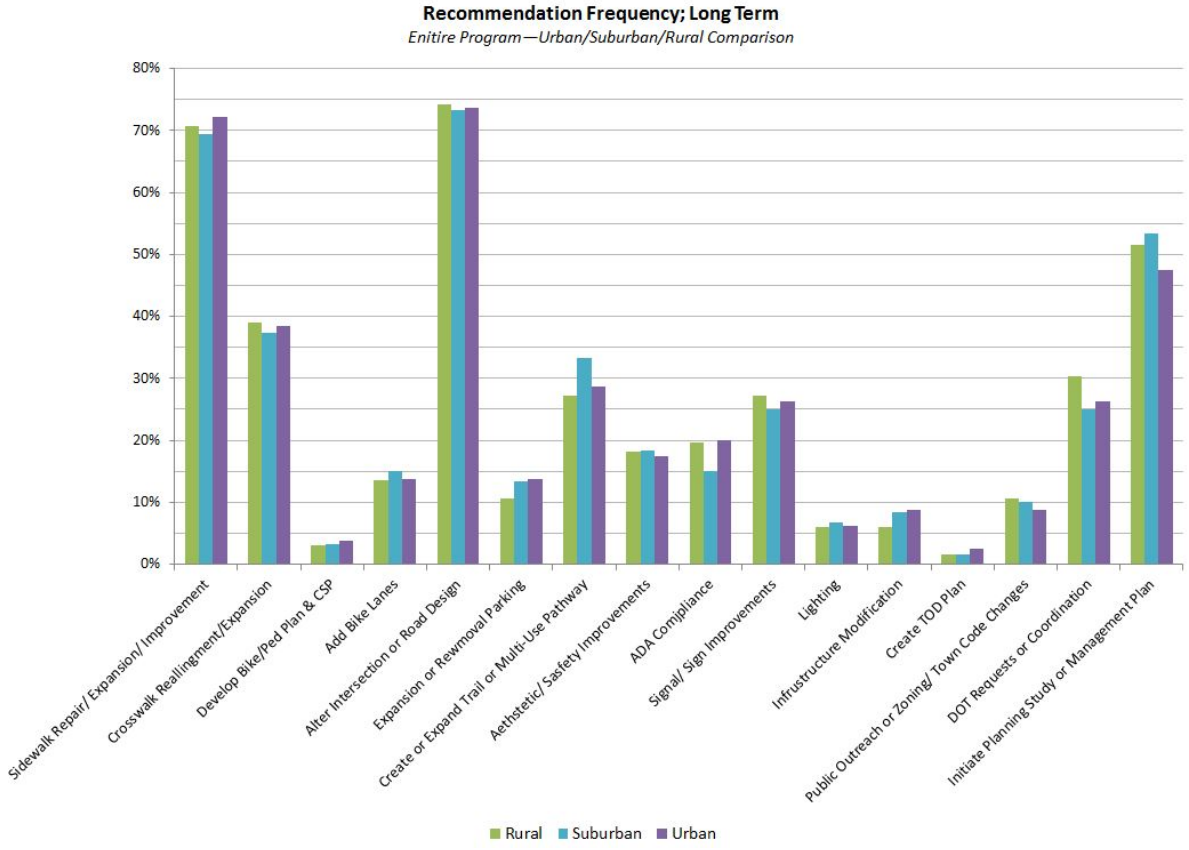


Figure 20 Long-Term Recommendations Program Wide

Figure 20 shows all recommendations made for long-term solutions broken out into rural, suburban, and urban areas. What is important to note here is that like short-term and midterm recommendations, density is practically irrelevant when looking at the distribution of

recommendations across communities. From the graph below it is clear that the majority of the locations audited required facilities to be upgraded, expanded, or repaired and municipalities are asking for assistance initiating projects.

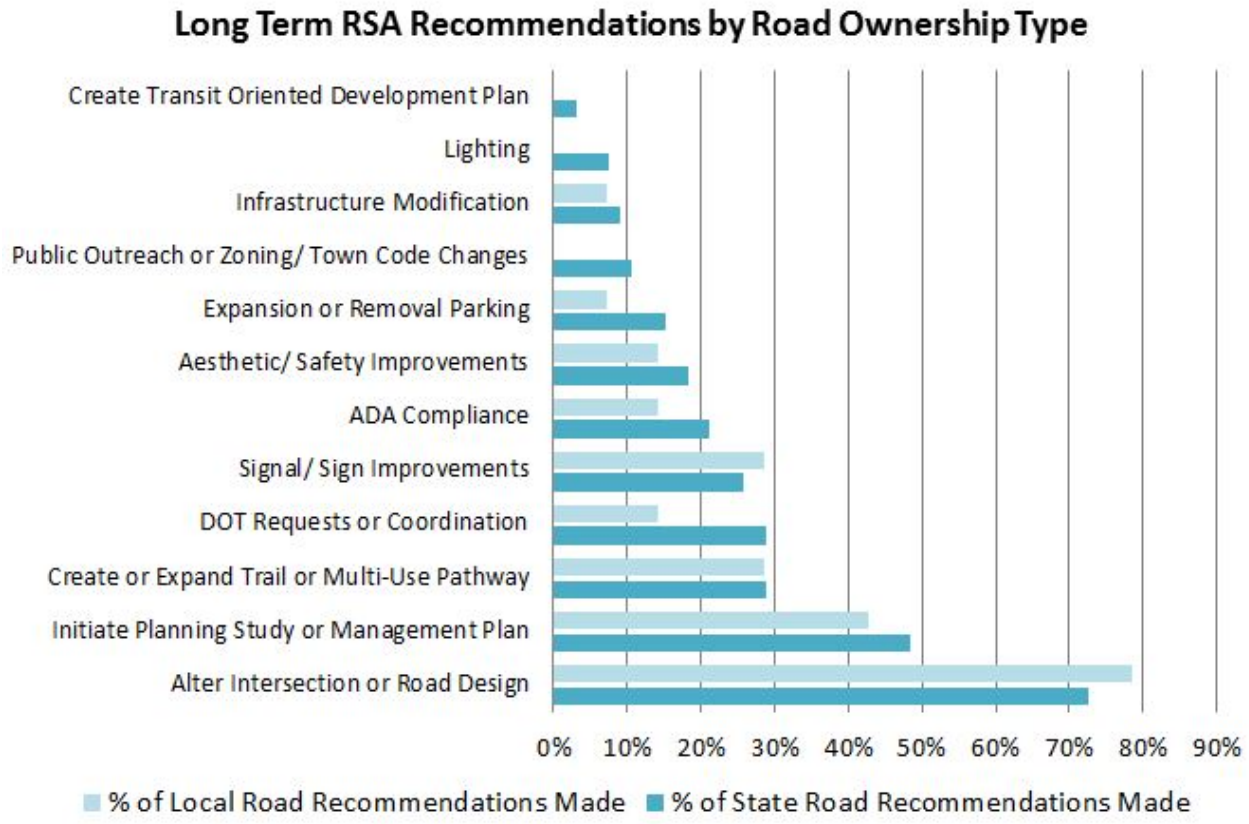


Figure 21 Long-Term Recommendations - State vs. Local Roads

The frequency of recommendations is relatively consistent with the exception that municipalities are requesting coordination with the CTDOT on state roads at almost double the rate of local roads to implement recommendations such as intersection and road designs or to initiate planning studies (Figure 21). Recommendations to initiate planning studies and alter intersections or road designs offer higher cost solutions to increase safety and will require time and context sensitive designs to accommodate all users.

Post-audit discussions with audit team members often included discussions for known needs indicated by either observed human behavior or by infrastructure wear and tear. The user-created walking path in Figure 22 is an example of wear and tear on New London's infrastructure and demonstrates the need to expand sidewalks. This location presents challenges such as existing signage that blocks pedestrians and lack of roadway width to install the desired sidewalk. It is examples such as this that attribute to the totals presented in Figure 20 and Figure 21. Clearly more rigorous studies are needed that include outreach to municipalities, state agencies, and land owners to implement projects.

Figure 22 New London RSA - Goat Paths

Similarly to mid-term recommendations, development and property ownership remain significant obstacles when trying to create a connected network for all users. Municipal boundaries also pose a challenge to project implementation (Figure 23). As communities continue to expand, the need for safe connections of non-motorized infrastructure from one town to another remains important. New London was one of many RSA's that saw infrastructure stop directly at town lines, forcing users to navigate uneven unimproved surfaces or use the roadways to navigate to their destinations. Figure 25 illustrates why vulnerable users entering the roadway without adequate facilities are at serious risk.

Figure 23 New London RSA - Border Connections

Figure 24 Scotland RSA - Speed Concerns

RSA's frequently focused on areas with relatively high speeds. The RSA team observed high speeds at locations with both tight (one lane in each direction) and large corridors (multiple lanes in each direction. Figure 24 illustrates a prime example of one of these speed concerns seen while conducting Scotland's RSA. Route 14 in Scotland sees a fair amount of heavy truck movement and as seen in the Figure 24, the hill in the background leads directly into Scotland's town center (in the foreground) where an unsignalized crosswalk exists. Vehicles were observed traveling over the posted speed limit of 40 mph in a location where sightlines are an issue.

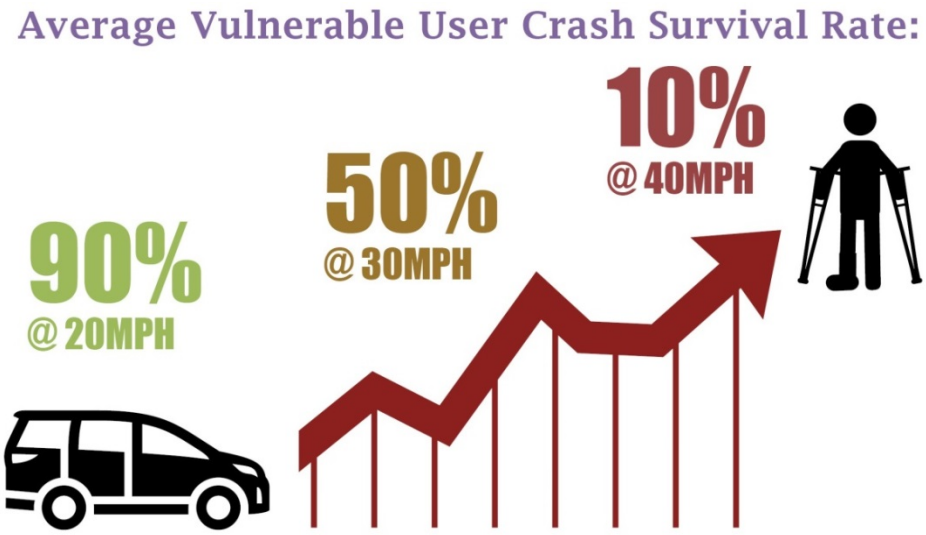


Figure 25 Vulnerable User Crash Survival Rate

4. Route 1 Corridor

4.1 Background

22.77 Miles
audited along Route 1 corridor

CTDOT conducted an RSA along the U.S. Route 1 corridor between the New York State line to the Westport/Fairfield border, a total distance of 22.77 miles. The corridor encompasses five municipalities: Greenwich, Stamford, Darien, Norwalk, and Westport. Because of the length of the corridor, and the differing stakeholders in the various municipalities, it was decided to treat each town as an individual RSA corridor. This chapter presents an overview of the findings of the RSA conducted along the entire Route 1 corridor.

U.S. Route 1 traverses the coastline of southwestern Connecticut parallel to Interstate 95 and is classified as a principal arterial. Urbanized segments of Route 1 see moderate pedestrian use in dense residential areas and central business districts. At the same time, Route 1 is used as a diversionary route for congestion along I-95, resulting in high traffic volumes during peak hours, as well as during highway construction or if a crash has occurred. This duality of uses results in conflicts between pedestrian usage and vehicular traffic and fails to meet all users' needs in terms of safety and access.

4.2 Location

The Route 1 RSA corridor is extremely diverse from municipality to municipality, ranging from dense urban centers to pockets of rural landscapes. The diversity of Route 1 creates challenges for all modes of travel. Below are brief descriptions of each RSA location by municipality:

9,100 to 29,800
Vehicles Per Day
Entire Route 1 RSA

The Greenwich corridor extends approximately 5.5 miles along U.S. Route 1 between the New York State border and the city line of Stamford. This segment of Route 1 sees moderate to high Average Daily Traffic (ADT) volumes, ranging from 12,600 to 29,400 vehicles per day (vpd) along its length.

The Stamford RSA includes U.S. Route 1 (3.2 miles) between the town line of Greenwich and the town line of Darien. The Average Daily Traffic ranges from 12,700 to 29,800 vehicles per day.

Figure 26 Route 1 RSA - Study Area

The Town of Darien corridor covers 3.9 miles of U.S. Route 1 between the City of Stamford border and the Norwalk town line. The Average Daily Traffic ranges from 9,100 to 22,800 vehicles per day along its length. These are considered moderate volumes for suburban/urban roadways.

The City of Norwalk RSA includes U.S. Route 1 from Darien to the border of Westport, a distance of 5.11 miles. The Average Daily Traffic on this segment is moderate to high volume, ranging from 12,600 to 29,400 vehicles per day.

The Westport corridor is 4.8 miles from the border of Norwalk to the Fairfield town line. Traffic volumes are moderate to high, with Average Daily Traffic ranging from 13,200 to 24,500 vehicles per day.

4.3 Crash Analysis

As noted above, traffic volumes are moderate to high along this urbanized corridor. Between 2015 and 2018 there were 4,278 crashes along the U.S. Route 1 RSA corridor. Route 1 primarily consists of a 4-lane cross section with 2 lanes of travel in each direction with left turn lanes where needed. Over 60% of the crashes were either front to rear (rear-end) or angle collisions and an additional 18% were sideswipe same direction, as seen in Table 5. In addition, 45% of accidents on Route 1 occurred at intersections. These statistics reflect both the design flaws in the corridor and in the region's traffic network. Route 1 has a high number of intersections and driveways with drivers frequently turning to pull into the many commercial establishments spread out along the corridor and pulling out of driveways into often fast-moving traffic. The corridor frequently sees significant levels of traffic congestion which is exacerbated when traffic is diverted from I-95. This mix of drivers using Route 1 to patronize businesses along the corridor or to travel locally and fast-moving through-drivers forced from I-95 creates dangerous conditions for drivers and non-motorized users alike.

Crash Type		
Manner of Crash / Collision Impact	**No. of Crashes**	
Front to rear	1,638	38%
Angle	1,276	30%
Sideswipe, same direction	779	18%
Sideswipe, opposite direction	51	1%
Not Applicable	251	6%
Rear to side	38	1%
Other	97	2%
Rear to rear	23	1%
Unknown	93	2%
Front to front	32	1%
Total	**4,278**	

Table 5 Route 1 RSA - Crash Type 2015-2018

While the great majority of crashes (81%) resulted only in property damage, 19% resulted in injuries, and less than 1% of crashes resulted in fatalities. Of the 10 fatal crashes, half (5) were located in Stamford. Additionally, the majority of fatal collisions along the corridor occurred after dark (70%), including all fatal pedestrian-involved incidents.

4.4 Recommendations

As with previous RSA studies, the RSA team used a short, mid, and long-term category system for recommendations.

4.4.1 Short-Term Recommendations: 6-12 months

More than 60 short-term recommendations were included in the five Route 1 RSA reports. The most common short-term recommendation was for sign and signal improvements, amounting to 25% of all short-term recommendations. Various small-scale planning activities, such as inventorying pedestrian signals, were recommended for all Route 1 RSA corridors. In addition, most RSA's included recommendations to coordinate with outside agencies to complete tasks, such as potential relocation of CTtransit bus stop locations and the addition or relocation of

signage. As Route 1 is a state-maintained road, coordination of improvements with CTDOT is essential.

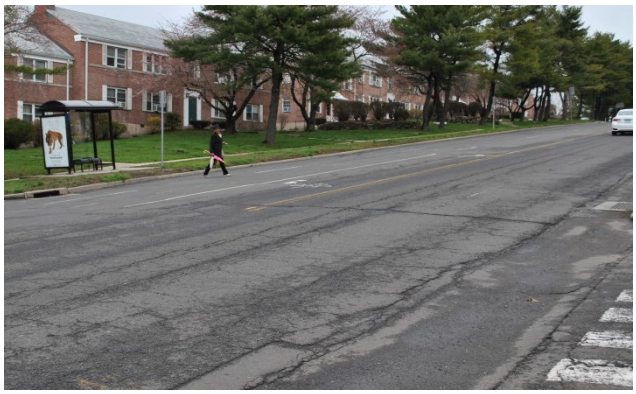


Figure 27 Route 1 RSA - Stamford
Pedestrian crossing mid-block

Crosswalk improvements and pavement marking changes were each recommended for 4 out of 5 RSA's. One such example can be found at the intersection of Seaton Road and East Main Street (Route 1) in Stamford, which was the site of a pedestrian fatality in 2015. This location features pedestrian-heavy facilities on both sides of the street; including bus stop shelters, a residential complex, and commercial amenities. Pedestrians were frequently observed crossing mid-block, as seen in Figure 27. This particular location is especially challenging due to the steepness of the road that limits sightlines of both pedestrians and motorists. As stated previously, these types of short-term recommendations improve safety and wayfinding for all users without requiring substantial investments to complete.

Figure 28 illustrates the frequency of all short-term recommendations along the Route 1 RSA.

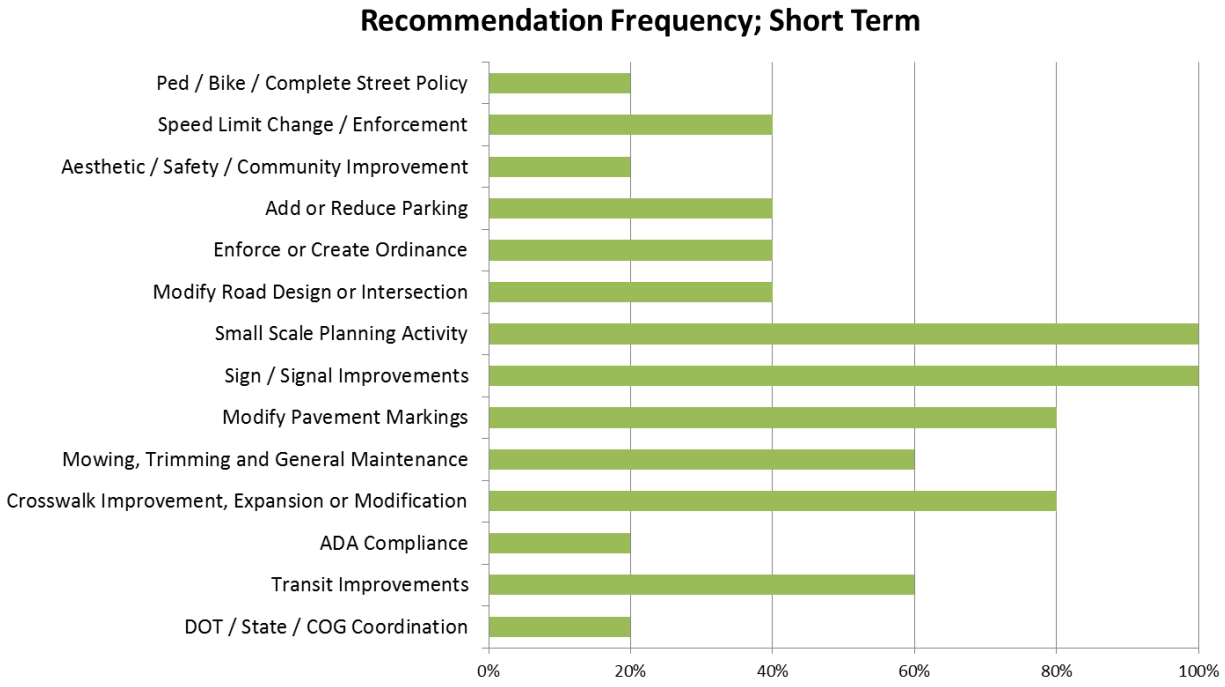


Figure 28 Route 1 RSA – Short-Term Recommendations

4.4.2 Mid-term Recommendations: 18 months – 2 years

Sign and signal improvements also dominated the mid-term recommendations, in cases where such could not feasibly be accomplished easily. This often included more substantial signal equipment replacement or roadway redesign needed to provide more convenient flows of non-motorized and motorized modes. Crosswalk improvements and road design modifications were also common suggestions to improve overall safety and access.

A mid-term recommendation in Darien to narrow the roadway and/or provide a parking cut-out in front of Nielsen's Florist & Garden Shop is an example of a road design modification. Figure 29 shows a large shoulder that is used as a loading and unloading zone for the business. This creates confusion and delays as it often distracts drivers and impedes the flow of traffic. A solution to narrow this shoulder and substantially reduce the crossing distance of pedestrians was discussed.

Figure 29 Route 1 RSA - Darien road narrowing recommended

Figure 30 illustrates the frequency of all types medium term recommendations along the Route 1 RSA.

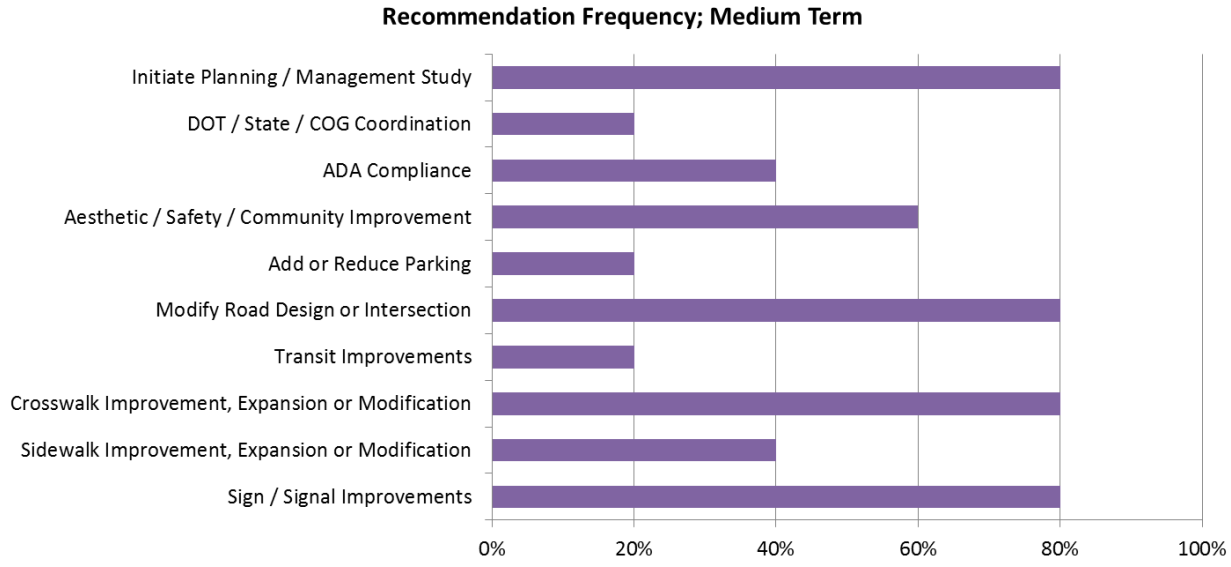


Figure 30 Route 1 RSA - Mid-term Recommendations

4.4.3 Long-Term Recommendations: 2+ years

Sign and signal improvements were also prevalent in the long-term recommendations. Recommendations for sign and signal improvements were suggested in all 5 RSA's, primarily accompanying intensive road modifications. One such recommendation in Westport included aligning the offset commercial driveways in Figure 31, including relocating the signage, signals, and crosswalks. Driver and pedestrian movements are not clear with the driveways currently offset and would benefit from a redesign to improve clarity of movements and overall safety.

Figure 31 Route 1 RSA - Westport Skewed 4-way intersection

Figure 32 illustrates the frequency of all long-term recommendations along the Route 1 RSA.

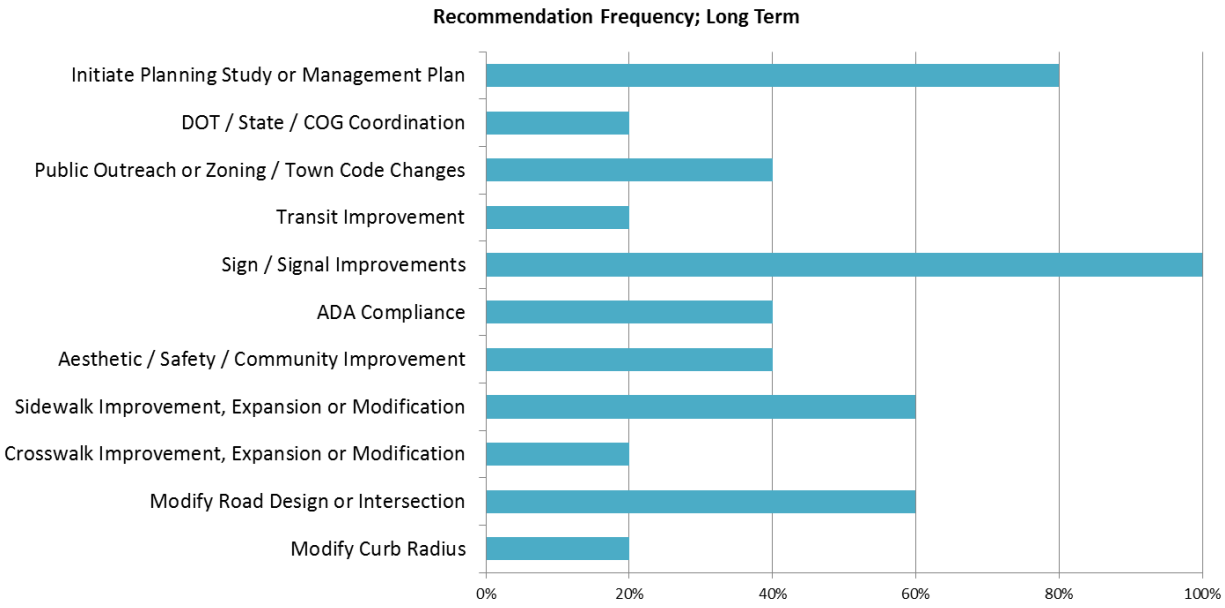


Figure 32 Route 1 RSA - Long-Term Recommendations

5. Lessons Learned

5.1 Overall Successes

CTDOT Ex-Officio appointee to the Bicycle/Pedestrian Advisory Board

The Bicycle/Pedestrian Advisory Board serves to promote, advocate, and advise state agencies on programs and facilities for bicycles and pedestrians. The CTDOT assists the board in carrying out these duties.

Vendor-in-Place Paving Program

The Vendor-in-Place Program (VIP) is for state-funded paving projects which are subject to repaving and striping as well aim to reduce travel land width and thereby create new potential space for non-motorized users.

From 2009-2016 the VIP Program improved over one hundred and fifty-four (154) miles of the State roadway.

Establishment of Complete Streets Committee Task Force

Established in 2012 as part of the CTDOT Complete Streets Policy, the Task Force coincides with the state-mandated Bicycle/Pedestrian Advisory Board (BPAB), established in 2009, Public Act 09-154, CT General Statute §13b-13a; as well as advocacy organizations such as Bike/Walk CT and the Connecticut Transportation Institute Technology Transfer Center (CTI).

5.2 Major Opportunities

Federal Highway Administration (FHWA) Guidelines on Pedestrian and Bicycle Safety

State and local maintenance programs should include best practices informed by FHWA Guidelines regarding Pedestrian and Bicycle Safety.

Encourage continuing education for Local Traffic Authorities (LTA)

Continue the LTA training program administered every two years by CTI.

Improve Communication Between CTDOT and Municipalities

Integrate communication plan between CTDOT and municipalities into requirements for state and local projects.

Appendix

A

Table A-1 – All Community Participants

Avon	Coventry	Naugatuck	Sprague
Ansonia	Cromwell	New Britain	Stamford
Beacon Falls	Danbury	New Fairfield	Southington
Berlin	Derby	Newington	Stonington
Bethany	East Hartford	New Hartford	Thomaston
Bethlehem	Ellington	New London	Thompson
Bloomfield	Enfield	New Milford	Tolland
Bolton	Fairfield	Norfolk	Torrington
Bozrah	Glastonbury	Norwalk	Vernon
Bridgeport	Griswold	Norwich	Warren
Bridgewater	Haddam	Plainville	Waterford
Bristol	Kent	Portland	Watertown
Brookfield	Litchfield	Prospect	West Hartford
Burlington	Manchester	Ridgefield	Westport
Cheshire	Mansfield	Salisbury	Weston
Canterbury	Middlebury	Scotland	Winchester
Canton	Milford	Seymour	Windham
Colchester	Meriden	Shelton	Windsor
Columbia	Montville	Simsbury	Woodbridge
Cornwall	Morris	South Windsor	Woodbury

Table A-2 – Participants by Community Profile Type

Town	Urban
Avon	Urban
Ansonia	Urban
Beacon Falls	Urban
Berlin	Urban
Bloomfield	Urban
Bolton	Urban
Bozrah	Urban
Bridgeport	Urban
Bristol	Urban
Brookfield	Urban
Cheshire	Urban
Canton	Urban
Cromwell	Urban
Danbury	Urban
Derby	Urban
East Hartford	Urban
Ellington	Urban
Enfield	Urban
Fairfield	Urban
Glastonbury	Urban
Haddam	Urban
Manchester	Urban
Mansfield	Urban
Middlebury	Urban
Milford	Urban
Meriden	Urban
Montville	Urban
Naugatuck	Urban
New Britain	Urban
New Fairfield	Urban

Town	Urban
Newington	Urban
New Hartford	Urban
New London	Urban
New Milford	Urban
Norwalk	Urban
Norwich	Urban
Plainville	Urban
Portland	Urban
Prospect	Urban
Ridgefield	Urban
Seymour	Urban
Shelton	Urban
Simsbury	Urban
South Windsor	Urban
Sprague	Urban
Stamford	Urban
Southington	Urban
Stonington	Urban
Thomaston	Urban
Tolland	Urban
Vernon	Urban
Waterford	Urban
Watertown	Urban
West Hartford	Urban
Westport	Urban
Weston	Urban
Windsor	Urban
Woodbridge	Urban
Woodbury	Urban

Town	Suburban
Colchester	Suburban
Coventry	Suburban
Griswold	Suburban
Litchfield	Suburban
Thompson	Suburban
Torrington	Suburban
Winchester	Suburban
Windham	Suburban

Town	Rural
Bethany	Rural
Bethlehem	Rural
Bridgewater	Rural
Burlington	Rural
Canterbury	Rural
Columbia	Rural
Cornwall	Rural
Kent	Rural
Morris	Rural
Norfolk	Rural
Salisbury	Rural
Scotland	Rural
Warren	Rural

Table A-3 – Participants by CTDOT Maintenance Districts

Town	DOT Region
Berlin	1
Bloomfield	1
Bolton	1
Bristol	1
Cheshire	1
Coventry	1
Cromwell	1
East Hartford	1
Ellington	1
Enfield	1
Glastonbury	1
Manchester	1
Meriden	1
New Britain	1
Newington	1
Plainville	1
South Windsor	1
Southington	1
Tolland	1
Vernon	1
West Hartford	1
Windsor	1

Town	DOT Region
Bozrah	2
Canterbury	2
Colchester	2
Columbia	2
Griswold	2
Haddam	2
Mansfield	2
Montville	2
New London	2
Norwich	2
Portland	2
Scotland	2
Sprague	2
Stonington	2
Thompson	2
Waterford	2
Windham	2

Town	DOT Region
Bethany	3
Bridgeport	3
Fairfield	3
Milford	3
Norwalk	3
Shelton	3
Stamford	3
Westport	3
Weston	3
Woodbridge	3

Town	DOT Region
Avon	4
Ansonia	4
Beacon Falls	4
Bethlehem	4
Bridgewater	4
Brookfield	4
Burlington	4
Canton	4
Cornwall	4
Danbury	4
Derby	4
Kent	4
Litchfield	4
Middlebury	4
Morris	4
Naugatuck	4
New Fairfield	4
New Hartford	4
New Milford	4
Norfolk	4
Prospect	4
Ridgefield	4
Salisbury	4
Seymour	4
Simsbury	4
Thomaston	4
Torrington	4
Warren	4
Watertown	4
Winchester	4
Woodbury	4

Table A-3.1 – Participants by CTDOT Maint. Dist. X Profile Type

Town	DOT Region	Profile Type
Berlin	1	Urban
Bloomfield	1	Urban
Bolton	1	Urban
Bristol	1	Urban
Cheshire	1	Urban
Cromwell	1	Urban
East Hartford	1	Urban
Ellington	1	Urban
Enfield	1	Urban
Glastonbury	1	Urban
Manchester	1	Urban
Meriden	1	Urban
New Britain	1	Urban
Newington	1	Urban
Plainville	1	Urban
South Windsor	1	Urban
Southington	1	Urban
Tolland	1	Urban
Vernon	1	Urban
West Hartford	1	Urban
Windsor	1	Urban
Coventry	1	Suburban

Town	DOT Region	Profile Type
Canterbury	2	Rural
Columbia	2	Rural
Scotland	2	Rural
Bozrah	2	Urban
Haddam	2	Urban
Mansfield	2	Urban
Montville	2	Urban
New London	2	Urban
Norwich	2	Urban
Portland	2	Urban
Sprague	2	Urban
Stonington	2	Urban
Waterford	2	Urban
Colchester	2	Suburban
Griswold	2	Suburban
Thompson	2	Suburban
Windham	2	Suburban

Town	DOT Region	Profile Type
Bethany	3	Rural
Bridgeport	3	Urban
Fairfield	3	Urban
Milford	3	Urban
Norwalk	3	Urban
Shelton	3	Urban
Stamford	3	Urban
Westport	3	Urban
Weston	3	Urban
Woodbridge	3	Urban

Town	DOT Region	Profile Type
Bethlehem	4	Rural
Bridgewater	4	Rural
Burlington	4	Rural
Cornwall	4	Rural
Kent	4	Rural
Morris	4	Rural
Norfolk	4	Rural
Salisbury	4	Rural
Warren	4	Rural
Avon	4	Urban
Ansonia	4	Urban
Beacon Falls	4	Urban
Brookfield	4	Urban
Canton	4	Urban
Danbury	4	Urban
Derby	4	Urban
Middlebury	4	Urban
Naugatuck	4	Urban
New Fairfield	4	Urban
New Hartford	4	Urban
New Milford	4	Urban
Prospect	4	Urban
Ridgefield	4	Urban
Seymour	4	Urban
Simsbury	4	Urban
Thomaston	4	Urban
Watertown	4	Urban
Woodbury	4	Urban
Litchfield	4	Suburban
Torrington	4	Suburban
Winchester	4	Suburban

Table A-4 – Participants By Council of Governments

Town	COG Region
Avon	CRCOG
Berlin	CRCOG
Bloomfield	CRCOG
Bolton	CRCOG
Canton	CRCOG
Columbia	CRCOG
Coventry	CRCOG
East Hartford	CRCOG
Ellington	CRCOG
Enfield	CRCOG
Glastonbury	CRCOG
Manchester	CRCOG
Mansfield	CRCOG
New Britain	CRCOG
Newington	CRCOG
Plainville	CRCOG
Simsbury	CRCOG
South Windsor	CRCOG
Southington	CRCOG
Tolland	CRCOG
Vernon	CRCOG
West Hartford	CRCOG
Windsor	CRCOG

Town	COG Region
Bridgeport	Metro COG
Fairfield	Metro COG

Town	COG Region
Cromwell	River COG
Haddam	River COG
Portland	River COG

Town	COG Region
Bozrah	SCCOG
Colchester	SCCOG
Griswold	SCCOG
Montville	SCCOG
New London	SCCOG
Norwich	SCCOG
Sprague	SCCOG
Stonington	SCCOG
Waterford	SCCOG
Windham	SCCOG

Town	COG Region
Burlington	North West Hills
Cornwall	North West Hills
Kent	North West Hills
Litchfield	North West Hills
Morris	North West Hills
New Hartford	North West Hills
Norfolk	North West Hills
Salisbury	North West Hills
Torrington	North West Hills
Warren	North West Hills
Winchester	North West Hills

Town	COG Region
Bridgewater	West COG
Brookfield	West COG
Danbury	West COG
New Fairfield	West COG
New Milford	West COG
Norwalk	West COG
Ridgefield	West COG
Stamford	West COG
Westport	West COG
Weston	West COG

Town	COG Region
Ansonia	NVCOG
Beacon Falls	NVCOG
Bethlehem	NVCOG
Bristol	NVCOG
Cheshire	NVCOG
Derby	NVCOG
Middlebury	NVCOG
Naugatuck	NVCOG
Prospect	NVCOG
Seymour	NVCOG
Shelton	NVCOG
Thomaston	NVCOG
Watertown	NVCOG
Woodbury	NVCOG

Town	COG Region
Canterbury	NECCOG
Scotland	NECCOG
Thompson	NECCOG

Town	COG Region
Bethany	SCRCOG
Milford	SCRCOG
Meriden	SCRCOG
Woodbridge	SCRCOG

Table A-4.1 – Participants by COG & Community Profile Type

Town	COG Region	Profile Type
Columbia	CRCOG	Rural
Avon	CRCOG	Urban
Berlin	CRCOG	Urban
Bloomfield	CRCOG	Urban
Bolton	CRCOG	Urban
Canton	CRCOG	Urban
East Hartford	CRCOG	Urban
Ellington	CRCOG	Urban
Enfield	CRCOG	Urban
Glastonbury	CRCOG	Urban
Manchester	CRCOG	Urban
Mansfield	CRCOG	Urban
New Britain	CRCOG	Urban
Newington	CRCOG	Urban
Plainville	CRCOG	Urban
Simsbury	CRCOG	Urban
South Windsor	CRCOG	Urban
Southington	CRCOG	Urban
Tolland	CRCOG	Urban
Vernon	CRCOG	Urban
West Hartford	CRCOG	Urban
Windsor	CRCOG	Urban
Coventry	CRCOG	Suburban

Town	COG Region	Profile Type
Bridgeport	Metro COG	Urban
Fairfield	Metro COG	Urban

Town	COG Region	Profile Type
Canterbury	NECCOG	Rural
Scotland	NECCOG	Rural
Thompson	NECCOG	Suburban

Town	COG Region	Profile Type
Bozrah	SCCOG	Urban
Montville	SCCOG	Urban
New London	SCCOG	Urban
Norwich	SCCOG	Urban
Sprague	SCCOG	Urban
Stonington	SCCOG	Urban
Waterford	SCCOG	Urban
Colchester	SCCOG	Suburban
Griswold	SCCOG	Suburban
Windham	SCCOG	Suburban

Town	COG Region	Profile Type
Bethlehem	NVCOG	Rural
Ansonia	NVCOG	Urban
Beacon Falls	NVCOG	Urban
Bristol	NVCOG	Urban
Cheshire	NVCOG	Urban
Derby	NVCOG	Urban
Middlebury	NVCOG	Urban
Naugatuck	NVCOG	Urban
Prospect	NVCOG	Urban
Seymour	NVCOG	Urban
Shelton	NVCOG	Urban
Thomaston	NVCOG	Urban
Watertown	NVCOG	Urban
Woodbury	NVCOG	Urban

Town	COG Region	Profile Type
Bridgewater	West COG	Rural
Brookfield	West COG	Urban
Danbury	West COG	Urban
New Fairfield	West COG	Urban
New Milford	West COG	Urban
Norwalk	West COG	Urban
Ridgefield	West COG	Urban
Stamford	West COG	Urban
Westport	West COG	Urban
Weston	West COG	Urban

Town	COG Region	Profile Type
Burlington	North West Hills	Rural
Cornwall	North West Hills	Rural
Kent	North West Hills	Rural
Morris	North West Hills	Rural
Norfolk	North West Hills	Rural
Salisbury	North West Hills	Rural
Warren	North West Hills	Rural
New Hartford	North West Hills	Urban
Litchfield	North West Hills	Suburban
Torrington	North West Hills	Suburban
Winchester	North West Hills	Suburban

Town	COG Region	Profile Type
Cromwell	River COG	Urban
Haddam	River COG	Urban
Portland	River COG	Urban

Town	COG Region	Profile Type
Bethany	SCRCOG	Rural
Milford	SCRCOG	Urban
Meriden	SCRCOG	Urban
Woodbridge	SCRCOG	Urban

Table A-5.1 – Participants by Profile Type X Crash Type																
	Urbanized or Rural	Unknown	Sideswipe-Same Direction	Rear-end	Turning Intersecting	Turning Opposite	Fixed Object	Backing	Angle	Turning Same	Moving Object	Parking	Pedestrian	Overturn	Head-on	Sideswipe Opposite
Avon	Urban	0	7	2	1	1	1	3	2	0	0	7	0	0	2	0
Ansonia	Urban	1	27	155	19	15	6	4	7	7	2	0	0	0	1	4
Beacon Falls	Urban	0	1	4	1	1	2	0	0	0	0	0	0	0	0	0
Berlin	Urban	0	6	80	11	6	12	1	2	4	3	0	1	0	0	2
Bethany	Rural	0	1	8	8	0	9	0	0	1	0	0	0	1	0	1
Bethlehem	Rural	0	0	1	3	0	3	0	0	0	0	0	0	0	0	0
Bloomfield	Urban	0	3	27	3	7	4	0	3	1	0	0	0	1	0	0
Bolton	Urban	0	1	1	2	0	6	0	0	0	0	0	0	0	0	0
Bozrah	Urban	0	0	0	2	2	1	0	1	0	0	0	0	0	0	2
Bridgeport	Urban	0	1	12	0	3	0	0	1	1	0	0	0	0	0	0
Bridgewater	Rural	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Bristol	Urban	2	16	77	16	15	17	9	11	4	4	1	0	3	2	6
Brookfield	Urban	0	1	10	6	7	1	1	0	1	1	0	0	1	0	1
Burlington	Rural	0	0	2	3	1	0	0	3	0	0	0	0	0	0	0
Cheshire	Urban	0	0	0	1	0	3	1	3	0	2	0	0	0	0	1
Canterbury	Rural	0	3	3	4	2	0	0	5	1	0	0	0	0	0	1
Canton	Urban	0	4	24	4	7	2	0	12	0	0	0	0	0	0	0
Colchester	Suburban	0	3	5	5	3	1	2	0	0	1	0	1	0	0	1
Columbia	Rural	0	1	7	2	2	6	2	0	1	3	0	0	0	0	1
Cornwall	Rural	0	0	3	2	0	0	0	0	1	0	0	0	0	0	1
Coventry	Suburban	0	1	3	3	0	5	0	0	1	8	0	0	0	1	0
Cromwell	Urban	0	1	7	2	2	6	2	0	1	3	0	0	0	0	1
Danbury	Urban	0	9	16	8	8	5	2	5	3	3	0	0	0	0	1
Derby	Urban	1	26	53	6	6	0	2	5	3	0	0	0	0	0	0
East Hartford	Urban	1	72	166	49	24	26	9	13	19	4	5	7	2	0	2
Ellington	Urban	0	3	47	19	4	9	3	3	1	0	0	1	0	1	1
Enfield	Urban	0	4	22	9	2	3	1	5	4	1	0	0	1	0	2
Fairfield	Urban		8	16	6	2	2	0	0	1	0	0	1	0	1	0
Glastonbury	Urban	0	1	24	21	4	1	1	2	1	0	0	0	0	0	0
Griswold	Suburban	0	11	23	10	4	8	3	1	1	1	3	2	0	0	3
Haddam	Urban	0	2	12	8	2	2	0	0	1	0	0	0	0	0	3
Kent	Rural	1	3	2	3	1	3	0	0	2	0	1	0	0	0	0
Litchfield	Suburban	0	1	1	0	0	6	0	0	0	0	0	0	1	0	1
Manchester	Urban	3	41	84	21	19	10	10	4	7	0	15	5	0	1	0
Mansfield	Urban	0	4	67	12	11	5	0	3	3	1	0	0	0	0	1
Middlebury	Urban	0	3	21	8	4	4	1	1	2	0	0	0	0	0	1
Milford	Urban	0	14	68	6	7	18	2	4	1	0	1	3	0	0	1
Meriden	Urban	0	3	6	5	1	3	2	2	0	0	1	1	0	0	1
Montville	Urban	0	28	150	32	26	36	4	12	12	4	0	4	4	5	7
Morris	Rural	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Naugatuck	Urban	3	31	55	33	11	14	11	13	5	0	5	2	2	1	6
New Britain	Urban	0	1	10	1	0	2	0	2	2	2	0	1	0	1	0
New Fairfield	Urban	0	3	41	24	3	17	1	2	4	11	0	0	1	0	2
Newington	Urban	2	41	142	22	18	11	10	9	9	4	1	1	1	0	2
New Hartford	Urban	1	3	33	5	3	8	1	1	1	1	2	0	0	2	1
New London	Urban	1	0	10	0	0	1	0	0	0	0	0	0	0	0	0
New Milford	Urban	0	16	78	38	7	6	3	3	4	0	0	2	2	2	5
Norfolk	Rural	0	6	9	4	0	28	1	0	1	1	0	0	1	2	2
Norwalk	Urban	0	2	1	1	0	5	1	0	3	0	0	1	1	0	0
Norwich	Urban	5	27	19	4	1	7	5	0	3	0	21	7	0	0	5
Plainville	Urban	0	13	60	14	11	12	5	8	6	1	2	2	1	0	3
Portland	Urban	0	10	89	15	2	14	2	0	6	0	0	0	0	1	2
Prospect	Urban	0	2	73	20	4	9	1	1	4	1	0	0	0	0	6
Ridgefield	Urban	0	9	66	22	6	11	0	5	3	4	0	2	0	0	3
Salisbury	Rural	1	0	26	9	1	5	3	1	1	0	4	2	0	0	0
Scotland	Rural	0	0	2	1	0	5	0	2	2	0	0	0	0	0	1
Seymour	Urban	0	30	75	7	13	8	6	3	13	0	3	1	0	1	4
Shelton	Urban	0	0	2	5	0	2	2	0	1	1	0	0	1	0	2
Simsbury	Urban	0	2	35	3	2	6	2	1	0	1	0	0	0	0	0
South Windsor	Urban	0	2	25	3	6	5	0	1	3	0	0	0	0	1	0
Sprague	Urban	1	1	2	3	0	16	5	2	0	1	1	0	0	0	0
Stamford	Urban	1	26	41	8	7	3	1	3	13	1	0	6	0	0	0
Southington	Urban	0	31	165	33	14	12	1	5	10	1	0	1	0	0	1
Stonington	Urban	0	7	65	16	10	4	1	2	3	2	0	0	0	1	2
Thomaston	Urban	0	8	38	17	3	18	1	4	1	4	1	1	1	0	2
Thompson	Suburban	0	0	8	11	5	20	0	2	4	0	0	0	0	2	3
Tolland	Urban	0	1	6	4	2	3	0	2	0	0	0	0	0	0	0
Torrington	Suburban	5	43	214	73	31	17	11	13	20	1	4	6	1	2	4
Vernon	Urban	0	4	14	7	4	11	3	2	2	0	1	0	0	0	0
Warren	Rural	0	0	1	1	1	3	0	0	0	0	0	0	0	0	2
Waterford	Urban	0	0	6	1	0	2	0	0	0	0	0	0	0	0	0
Watertown	Urban	2	9	10	5	2	4	5	3	1	0	2	0	2	0	0
West Hartford	Urban	3	35	59	41	8	4	4	34	5	0	0	0	0	3	1
Westport	Urban	2	5	34	8	6	6	5	3	0	8	1	1	0	0	2
Weston	Urban	4	5	26	11	6	29	2	4	3	17	0	0	0	2	2
Winchester	Suburban	4	57	107	34	22	25	9	6	14	2	20	2	2	3	3
Windham	Suburban	2	19	37	11	10	4	9	2	3	0	10	2	1	0	4
Windsor	Urban	0	24	57	37	18	19	4	10	16	4	0	7	0	0	0
Woodbridge	Urban	2	11	51	11	6	6	3	7	5	1	0	1	0	0	2
Woodbury	Urban	0	2	29	7	1	6	2	0	0	0	0	2	1	0	0